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Authors

Zhong, Connie S
Mostaghimi, Arash
Nambudiri, Vinod E

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Impact of medical scribes on dermatology trainee and attending experience

Connie S Zhong MSc, Arash Mostaghimi MD MPA MPH, Vinod E Nambudiri MD MBA

Affiliations: ¹Harvard Medical School, Boston, Massachusetts, USA, ²Department of Dermatology, Brigham and Women's Hospital, Boston, Massachusetts, USA

Corresponding Author: Vinod Nambudiri MD MBA, Brigham and Women's Hospital, Department of Dermatology, 221 Longwood Avenue, Boston, MA 02115, Email: vnambudiri@bwh.harvard.edu

Abstract

Background: Medical scribe integration into academic dermatology practices results in decreased attending documentation time, improved physician efficiency, and positive patient satisfaction. However, scribes' impact on dermatology education has not been explored.

Methods: We conducted a cross-sectional survey at the Brigham and Women's Hospital Dermatology Department and its associated residency program assessing trainee and attending perceptions of scribe impact on documentation time, teaching time, and quality of teaching.

Results: Thirty-nine surveys (67% of eligible population) were analyzed. The majority of faculty and trainees perceived that scribes decreased documentation time (92% attendings, 88% trainees), increased attendings' direct teaching time (57% attendings, 76% trainees), increased attending availability to answer questions (57% attendings, 68% trainees), and improved overall education (57% attendings, 80% trainees). Trainees generally perceived educational benefits of scribes more strongly than attendings. Trainees and attendings had discordant views regarding number of patients that the trainee sees (29% attendings, 72% trainees, $P < 0.05$) and the amount of supervision provided for procedures (43% attendings, 56% trainees).

Conclusions: The positive impact of scribes on dermatology education is consistent with results in other disciplines. Although hospitals typically invest in scribes to increase physician efficiency, this study suggests that scribes can also improve the educational experience.

Keywords: medical education, medical scribes, dermatology education

Introduction

Medical scribes are utilized to facilitate electronic medical record system data entry [1]. In dermatology, scribes help decrease documentation burden and improve physician and patient satisfaction [2, 3]. However, little is known about the impact of scribes on trainees and medical education. Studies in the emergency department have found that both faculty and residents perceive an increase in teaching when scribes are present, with residents perceiving the increase more strongly [4, 5]. However, granular aspects of teaching, such as availability to answer questions and faculty approachability, were unchanged in such studies [5]. Although emergency medicine and dermatology are both high volume fields, they differ in patient predictability and workflow, which may alter the impact of scribes across the two fields. No studies to date have examined the impact of scribes on dermatology education. The purpose of this study was to evaluate how scribes affect attending and trainee perceptions of dermatologic education in an academic dermatology practice.

Methods

A cross-sectional anonymous survey was conducted at the Brigham and Women's Hospital Dermatology Department. This study was deemed exempt from obtaining institutional review board approval by the Partners Healthcare Institutional Review Board, Boston, MA. Dermatology residents and fellows (trainees who had completed their dermatology residency and were pursuing additional subspecialty training) who had worked in clinics with

dermatology attendings with medical scribes were surveyed. Attending dermatologists who utilized scribes and worked with trainees were surveyed separately. Both the attending and trainee surveys consisted of questions rated on a five-point Likert scale, from “strongly disagree” to “strongly agree” and examined perceptions of documentation time, teaching time, clinical burden, and quality of teaching. Descriptive and comparative statistics were performed, and qualitative review of survey comments was conducted.

Results

Twenty-five trainees (25/38, 65.7% response rate) and 14 faculty (14/20, 70%) surveys were analyzed. Of the trainee responses, 77.5% (31/40) were residents and 22.5% (9/40) were fellows. Attendings averaged 4.7 ± 1.9 clinical dermatology sessions per week, with 3.4 ± 1.6 clinics having a scribe, 2.2 ± 0.8 clinics having a trainee present, and 1.4 ± 0.6 clinics having both a trainee and scribe present simultaneously. The presence of a scribe was associated with an increase of 1-2 patients scheduled per half-day clinic.

The majority of faculty and trainees perceived that scribes decreased documentation time (92% attendings, 88% trainees), increased attendings’ direct teaching (57% attendings, 76% trainees), increased attending availability to answer questions and address trainees’ concerns (57% attendings, 68% trainees), and improved overall education (57% attendings, 80% trainees), (**Figure 1**).

Faculty and trainee responses differed regarding the number of patients seen by trainees and the amount of attending supervision provided. Seventy-two percent of trainees believed scribes increased trainee patient volume, compared with 29% of faculty sharing the same impression ($P < 0.05$). Fifty-six percent of trainees perceived scribes to increase the amount of supervision that attendings provided for procedures, whereas only 43% of attendings reported similar impressions ($P = 0.51$). In terms of overall perception of scribes on dermatology education, 57% of attendings believed that scribes improved their overall effectiveness as an educator in dermatology and 57% of attendings believed that scribes improved their ability to teach even in non-

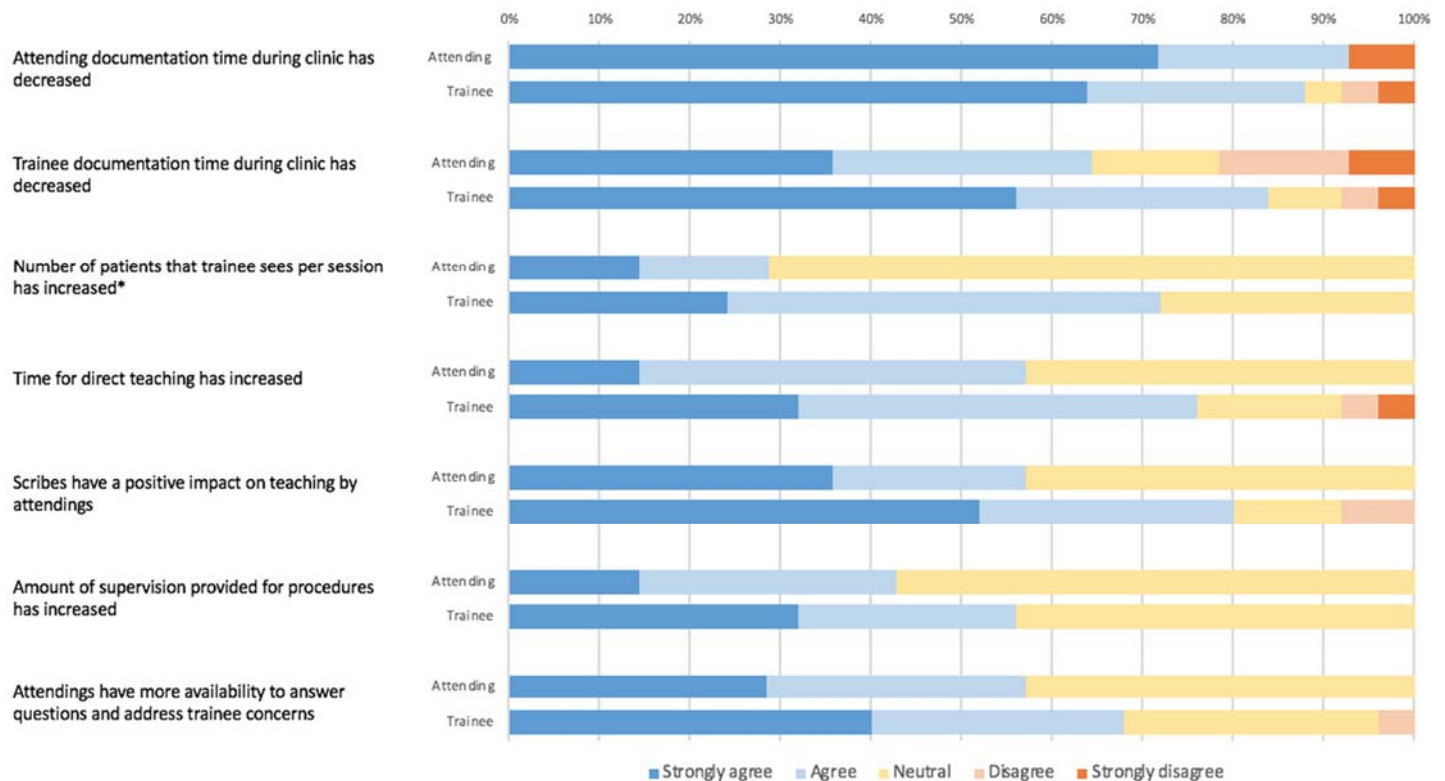


Figure 1. Attending (N=14) and trainee (N=25) responses (% of respondents who agreed with the following statements). * $P < 0.05$ comparing proportion of attendings versus trainees who agreed or strongly agreed.

scribe supported sessions by decreasing their overall clinical documentation burden (**Figure 2**). Eighty percent of trainees believed that scribes improved their overall education in dermatology and 64% of trainees perceived the quality of teaching from attendings during scribe-supported sessions to be improved. Across nearly all domains, trainees more strongly perceived the educational benefits of scribes compared with attendings (**Figure 1**).

Qualitative review of the survey comments suggested that other benefits of scribes were their ability to teach trainees how to document efficiently. Additionally, respondents felt scribes made attendings more willing to teach during clinical sessions as residents were not so preoccupied with documentation. Some trainees noted that scribes were most helpful when the relationships between scribes, trainees, and attendings were ongoing so that less time was spent revising notes. There was high variability in scribe experience depending on the extent to which scribes were used by each attending. Some trainees felt that attendings focused more on the scribe, which could detract from teaching the resident. Nonetheless, most residents felt that scribes allowed trainees to focus more on learning, such as reading up on patient’s histories.

Discussion

We found that scribes were perceived positively by both dermatology trainees and attendings in enhancing the medical education experience. Though limited to a single institution, our findings are consistent with studies in other fields [4, 5].

Previous studies have suggested that scribes improve physician efficiency, which frees time for scholarly, leadership, teaching, or personal pursuits [2]. Our study suggests that similar benefits may be realized in the dermatology trainee population. Trainees were more likely than attendings to note a positive impact of scribes on their education. This perception difference is notable and may highlight the decreased documentation burden for attendings translating into increased availability to participate in trainee education. In addition, trainees positively perceived increases in patient volume along with decreased time for documentation, further augmenting their educational opportunities. Thus, the positive educational impacts of scribes appear multifactorial.

Limitations of our study include the use of subjective rather than objective measures of educational impact and the single institution nature of our experience. Furthermore, heterogeneity in how

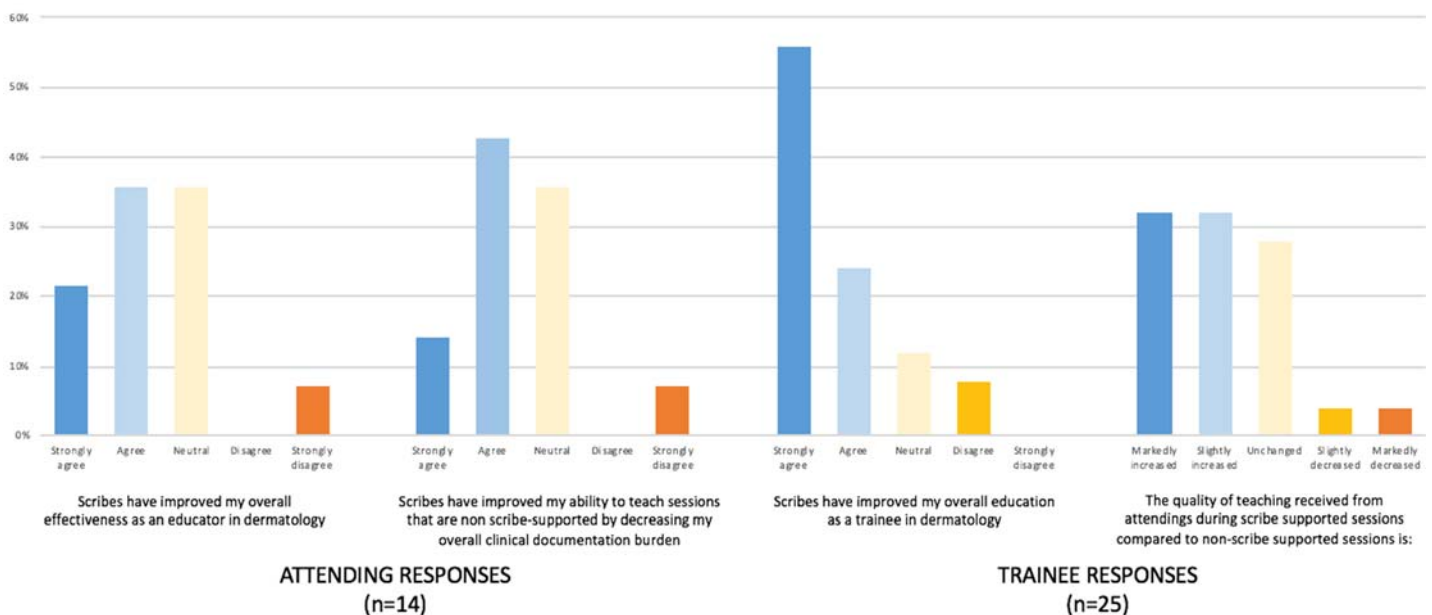


Figure 2. Attending (N=14) and trainee (N=25) perceptions of medical scribes on dermatology education (% of respondents who agreed with the following statements).

attendings use scribes exists, which may affect teaching; approaches of the attending to trainee education may also be variable. Nevertheless, this study suggests that, like in other fields, the use of scribes can improve the educational experience for dermatology trainees.

In the future, we hope to examine concrete measures of educational enhancement, such as teaching time, number of publications, in-service examination scores, and resident evaluations. From our qualitative review, we observed residents reported using their extra time to focus on learning, such as reading about patients. Future investigations into whether this translates into enhanced clinical knowledge or improved patient outcomes are warranted.

References

1. Gellert GA, Ramirez R, Webster SL. The rise of the medical scribe industry: implications for the advancement of electronic health records. *JAMA*. 2015;313:1315-6. [PMID: 25504341].
2. Nambudiri VE, Watson AJ, Buzney EA et al. Medical Scribes in an Academic Dermatology Practice. *JAMA Dermatol*. 2018;154:101-103. [PMID: 29094159].
3. Nambudiri VE, Watson AJ, Rubenstein MH et al. Association of Patient Satisfaction With Medical Scribe Use in an Academic Dermatology Practice. *JAMA Dermatol*. 2018;154:480-482. [PMID: 29466547].
4. Hess JJ, Wallenstein J, Ackerman JD et al. Scribe Impacts on Provider Experience, Operations, and Teaching in an Academic Emergency Medicine Practice. *West J Emerg Med*. 2015;16:602-10. [PMID: 26587079].
5. Ou E, Mulcare M, Clark S, Sharma R. Implementation of Scribes in an Academic Emergency Department: The Resident Perspective. *J Grad Med Educ*. 2017;9:518-522. [PMID: 28824769].

Conclusion

Although hospitals primarily invest in scribes to increase efficiency [1, 2], our study suggests that scribes have additional benefits on improving educational experience. This enhanced education, along with decreased documentation burden, has the potential to decrease burnout in both trainees and faculty [4]. Future studies with objective measures of time spent on teaching trainees and specific pedagogical strategies to maximize educational impact are needed.

Potential conflicts of interest

The authors declare no conflicts of interests.